

Navy Environmental Health Center
Industrial Hygiene Heat Stress Afloat Survey Form - NEHC Form
5100/20 Explanations and Definitions
(Version 4/03)

Industrial Hygiene Heat Stress Afloat Survey Form - NEHC Form 5100/20 - This form is used to record information collected while performing heat stress surveys afloat.

Form fields marked in this Explanations and Definitions as “Required” are fields that are thought to be important information. Some of the “Required” fields have conditions listed. If those conditions are not applicable, those fields are either not applicable or optional. Form fields marked in this Explanations and Definitions as “Optional” are fields that provide useful but extra information or are only used by some industrial hygiene groups. On the actual survey form, the “Optional” fields are shaded.

FIELD NAME	DEFINITION
Sample Date (Required)	The date the sample is collected.
IH UIC (Required)	The Unit Identification Code (UIC) of the command providing industrial hygiene support to the sampled command.
Activity (Required)	The name of the sampled command receiving industrial hygiene support.
UIC (Required)	The UIC of the sampled command receiving industrial hygiene support.
Field Office (Optional)	A city or other descriptive identifier of the location of the activity being sampled. This is useful in situations where the command has multiple field locations, and the activity name, UIC and building/location do not provide sufficient detail to discern between different field offices of the command. This field is optional and is currently used by only a few IH field activities.
Hull # (Required)	The hull number of the ship where the individual being sampled works or where the sample is being collected.
Shop Location (Required)	The ship compartment number of the shop where the individual being sampled works or where the sample is collected.
Shop Code/Name (Required)	The number and/or name of the shop where the individual being sampled works or where the sample is being collected
Personal or Area (Required)	Record whether this is a personal air or general area air sample. Circle “Personal” or “Area”.

Industrial Hygiene Heat Stress Afloat Survey Form Explanations and Definitions (Version 4/03)
(Continued.)

FIELD NAME	DEFINITION
Worksite (Optional)	A description of the location inside the ship compartment where the sample is actually collected.
Related Shop SOP (Optional)	A number or name of any standards of practice (SOP) used during the sampled operation. This field is optional and is currently used by only a few IH field activities.
Employee Name (Last, First, MI) (Required for personal samples)	The complete name of the individual being sampled.
SEG Population ID (Optional)	Similar Exposure Group (SEG) Population Identification: A number or name of a similarly exposed group as that of the individual being sampled or for the sampled operation. A SEG is defined by the industrial hygienist. This field is optional and is currently used by only a few IH field activities.
Gender (Required for personal samples)	Record whether the individual being sampled is male or female. Circle “M” for male or “F” for female.
SSN/Badge # (SSN (or other number for foreign nationals) - Required for personal samples) (Badge # - Optional, if SSN or other identification number (for foreign nationals) is used)	It is preferred that the full social security number (SSN) be documented for the individual being sampled. However, at least, the last 4 digits of the SSN should be documented. The badge number can also be documented for the individual being sampled, particularly if the individual does not have a SSN for some reason (e.g., foreign national, etc.).
Job Title (Required for personal samples)	The job title of the individual being sampled.
Mil/Civ/FORNAT (Required for personal samples)	Record whether individual being sampled is military, civilian or a foreign national. Circle “M” for military, “C” for civilian or “FN” for foreign national.
TAD (Required for personal samples)	Record whether the individual being sampled is at the activity on temporarily assigned duty (TAD). This gives you information so that sampling information, SF600s or other notifications can be sent or the proper (parent) activity.

Industrial Hygiene Heat Stress Afloat Survey Form Explanations and Definitions (Version 4/03)
(Continued.)

FIELD NAME	DEFINITION
Parent Activity (Required for personal samples, if TAD is yes)	When an individual being sampled is at an activity on TAD, the parent activity is the name of the command to which an individual normally belongs. This gives you information so that sampling information, SF600s or other notifications can be sent or the proper (parent) activity.
Parent UIC (Required for personal samples, if TAD is yes)	When an individual being sampled is at an activity on TAD, the parent UIC is the UIC of the command to which an individual normally belongs. This gives you information so that sampling information, SF600s or other notifications can be sent or the proper (parent) activity.
OPCODE (Required)	The operation code, which most closely matches the operation being sampled. The list of operation codes can be found in the Industrial Hygiene Field Operations Manual, Appendix 3-A.
Operation (Required)	The operation name from the operation code list, which most closely matches the operation being sampled. The list of operations can be found in the Industrial Hygiene Field Operations Manual, Appendix 3-A.
Task (Required)	A short descriptive identifier that further defines the sampled operation, providing more detail.
PPE Description (Required for personal samples)	A description of any personal protective equipment used, if any, by the individual being sampled. If no personal protective equipment is used, state "None".
PPE Code(s) (Optional)	The code(s) of the personal protective equipment used, if any, by the individual being sampled. The list of codes to use can be found in Industrial Hygiene Field Operations Manual, Appendix 3-A.
Routine Watch (Required)	Record if the individual being sampled is performing a routine watch. If so, mark the appropriate box on the form.
Casualty Control Drill (Required)	If a casualty control drill is performed during the survey, mark the appropriate box on the form.
Time (Required)	The time that the measurement is taken.
Shift (Required)	The shift that the individual being sampled is working. Mark the appropriate number code box on the form. 1 = Day 2 = Evening 3 = Night

Industrial Hygiene Heat Stress Afloat Survey Form Explanations and Definitions (Version 4/03)
(Continued.)

FIELD NAME	DEFINITION
Frequency of Operation (Required)	The frequency of the sampled operation. Mark the appropriate number code box on the form. 1 = Daily 2 = 2-3 Times/Week 3 = Weekly 4 = 2-3 Times/ Month 5 = Monthly 6 = 2-3 Times/Year 7 = Yearly 8 = Special Occasions
Duration of Operation (Required)	The duration of the sampled operation. Mark the appropriate number code box on the form. This is the usual or normal time it takes to perform the operation. 1 = 0 - 15 minutes 2 = 15 - 30 minutes 3 = 30 - 60 minutes 4 = 1 - 2 hours 5 = 2 - 4 hours 6 = 4 - 6 hours 7 = 6 - 8 hours 8 = >8 hours
Sample # (Optional, if samples are not tracked)	The unique number used by the IH group to identify and track the sample.
Dry Bulb (Required)	The dry bulb temperature, in degrees Fahrenheit or degrees Celsius. This is the temperature measured using a standard alcohol in glass or mercury in glass thermometer with the bulb dry and shielded from radiant heat.
Wet Bulb (Required)	The wet bulb temperature, in degrees Fahrenheit or degrees Celsius. This is the temperature measured using a standard alcohol in glass or mercury in glass thermometer with a wet wick over the bulb and shielded from radiant heat and air moving over the wet wick by a fan, motorized psychrometer or sling psychrometer.
Globe (Required)	The globe temperature, in degrees Fahrenheit or degrees Celsius, measured using a globe thermometer. The globe temperature integrates radiant heat exchange and convective heating or cooling into a single value.
WBGT (Required)	The Wet Bulb Globe Temperature Index takes into account air temperature, humidity, radiant heat and air movement
Spot Cooler (Required)	The air movement, in feet per minute, for any spot coolers used.

Industrial Hygiene Heat Stress Afloat Survey Form Explanations and Definitions (Version 4/03)
(Continued.)

FIELD NAME	DEFINITION
PHL I-VI (Required)	The Physiological Heat Exposure Limits (PHL) are the stay times allowed based on curves derived from the WBGT Index and the individual's physical exertion level.
Propulsion Type (Required)	A description of the type of propulsion for the ship.
Ship's Speed (Required)	The ship's speed in knots or RPM.
Boilers/Reactors/ Turbines/Diesels On Line (Required)	A description of the equipment operating during the survey, such as boilers, reactors, turbines or diesels, which could affect the measurements.
Mean Seawater Injection Temperature (Required)	The mean seawater injection temperature in degrees Fahrenheit or degrees Celsius.
Ambient Temperature (Before and After) (Required)	The ambient dry bulb and wet bulb temperatures, in degrees Fahrenheit or degrees Celsius, measured before and after the heat stress survey at the location of the survey measurements.
Instrument (Mfg, Model, Serial #) (Required)	The manufacturer, model and serial number of the sampling instrument.
Field Calibration Method (Required)	The method used to calibrate the sampling instrument
Pre Cal Date (Required)	The date the sampling instrument is pre calibrated. This must be the same date as the post calibration date and sample date unless sampling is performed across the midnight hour.
Post Cal Date (Required)	The date sampling instrument is post calibrated. This must be the same date as the pre calibration and sample date unless sampling is performed across the midnight hour.
Field Calibration OK (Required)	Record whether the sampling instrument calibrated properly, by marking the appropriate box on the form: "Yes" or "No".
Field Calibrated By (Required)	The printed name and signature of the person performing field calibration on the sampling instrument.
Last Mfg. Cal Date (Required)	The date the sampling instrument was last calibrated by the manufacturer or calibration laboratory.
Next Mfg. Cal Date (Required)	The date the sampling instrument is next due to be calibrated by the manufacturer or calibration laboratory.
Shift Length (Optional)	The length of the shift that the individual being sampled works.

Industrial Hygiene Heat Stress Afloat Survey Form Explanations and Definitions (Version 4/03)
(Continued.)

FIELD NAME	DEFINITION
Actual Length of Sampled Work (Required)	The actual amount of time the operation being sampled is performed on the sample date. This may or may not correspond to the sample duration.
Time Course of Events/Comments (Required)	A <u>detailed</u> chronological description of the operation being sampled and any other comments or observations about the sample period. Anyone reading this time course of events should be able to develop a mental image of what occurred during the operation.
Sampler (Required)	The printed name and signature of the industrial hygienist, industrial hygiene technician or workplace monitor performing the sampling.
Date Completed (Required)	The date the form is signed by the industrial hygiene technician, workplace monitor or industrial hygienist performing the sampling.
Reviewing IH (Required)	The printed name and signature of the industrial hygienist reviewing the sample form.
Date Reviewed (Required)	The date the form is signed by the industrial hygienist reviewing the sample form.
Data Entered By (Optional)	The printed name and signature of the person entering the sampling form information into the sample database. This only applies if the IH group utilizes a sample database.
Date Entered (Optional)	The date the sampling form information is entered into the sample database. This only applies if the IH group utilizes a sample database.
Privacy Act Statement (Optional) (But may be required by some Commands for legal purposes)	To be read, signed, and dated by the individual(s) being sampled, if required by your Command.